Books.

School Builder's Guide, and School Furniture Pattern Book. By the Rev. CHARLES RICHSON, M.A. London: Darton and Co. 1850.

All who have to design, build, or conduct parochial and national schools will find Mr. Richson's pamphlet of much use. It is divided into three parts, the school fabric, the school fixtures, and the school furniture, and contains many illustrations, including a design for schools, by Messrs. Holdens. The author properly points out that it is bad economy to attempt to save the expense of an architect in erecting school buildings.

Miscellanea.

ARCHITECTS' REQUIREMENTS:—CAST-IRON.—Mr. Fairbairn, in a report on the cause of failure of the mill at Stockport, mentioned in our pages a short time since, made the following remarks, which are eminently worthy of attention:—Cast-iron may be said to be of almost universal application at the present time, in the construction of buildings. Its use is, at all events, very extended; and the repeated occurrence of lamentable accidents, which have hurried numbers to their graves without the means of escape, or a single moment's reflection, evidences a deplorable want of knowledge of its general properties amongst those who undertake the designing and erection of buildings, and seems to call for the interference of the strong arm of the law, or, at least, for the supervision of some higher authority than now exists, to enforce obedience to those well-established principles and facts which point out a way to its perfectly secure adaptation, when duly and accurately proportioned to the duties it may be called upon to perform. No material is of greater value in all the requirements of building, machinery, and the constructive arts generally; and, when employed under the directions of men of knowledge and judgment, it fully establishes its claim to be reckoned amongst the most valuable mineral productions of the country. On the other hand, when its application is undertaken by, or entrusted to the management of, the unthinking and ill-informed, who possess no knowledge of, or have not taken the trouble to make themselves acquainted with, its cohesive strength and powers of resistance, it becomes in such hands a most dangerous enemy, instead of a useful and powerful auxiliary. The following qualifications appear to me necessary to the successful pursuit of his profession by the practical architect and engineer:—Firstly, a knowledge of the strength and other properties of the materials which he employs; secondly, the skill necessary to distribute and proportion the parts in such form as will insure the maximum of strength, with the minimum of material; and, lastly, in the use of cast-iron and other metals, an acquaintance with the laws of expansion and contraction, in order that he might be enabled, in every construction which requires strength, and in the security of which the safety of the public is involved, to reckon with certainty upon the calculated or estimated duty of each particular casting.

STATE OF BLACKFRIARS BRIDGE.—In a letter from Mr. J. Walker, of the firm of Walker and Burge, to the comptroller of Bridge House Estates, ostensibly, though not very clearly, showing that there is no reason for alarm, or for stopping the traffic along Blackfriars Bridge, we find it stated, that between 26th June and 24th August, there has been a sinking of one inch in fifth pier from Middlesex side. That, from 24th August to date of letter, namely, 13th inst., there has been no further sinking. That the sinking has arisen from the bed of the river being lowered by the current of the tide and the wash of steamboats, so as to be 6 feet under the tops of the piles that inclose the pier (the former level of the bed of the river), and that the stoppage to the sinking is to be ascribed to the stone and other heavy material (upwards of 3,000 tons), which, during the last two months, have been thrown in to restore the level; and also to the repairs which have been done to the paving and piling of the foundation by the diving-bell.

INTERNATIONAL EXHIBITION.—The returns of space required by Manchester exhibitors show that 570 square feet of flooring, 940 feet of counter, and 4,595 feet of wall room, could be filled by manufactures; while 10,536 feet of floor, 303 of counter, and 408 of wall room, were demanded for machinery; and for sundries 16 feet of floor, 197 of counter, and 290 of wall room. The total space placed at the disposal of the Manchester committee was 10,000 feet; and of this 7,662 feet had already been allotted to works of an engineering and mechanical character. The greatest height required for machinery was 40 feet, and for manufactures 15 feet.——The Bolton Committee have issued an address to the local workmen, in which they say—"It is almost certain that every intelligent mechanic and artizan, anxious to improve himself in his particular trade, and advance his position in society, will not fail to visit the 'Industrial Works of all Nations.' Because—At a trifling expense of time and money he may leisurely examine the raw materials and manufactured products of the whole globe, which hitherto the very wealthy only have been able to see, and that by an immense expenditure in travelling. Because—He can compare the various materials and products with each other, discover which of the former are best suited to the uses of his trade, avoid the errors and imitate the excellences of the latter. Because—He can in numerous instances see the tools, machines, and means employed in, and the designs, patterns, and combinations of other arts, which may be advantageously adapted to his own. Because—If he neglect to avail himself of the advantages offered, he will be in a worse position than his fellow-workmen who embrace them. The exhibition will thus injure him if he refuse to benefit by it. Because—In many branches he will find that in one way or another the foreigner excels him, but he may also discover how he is excelled, and, knowing this, he will take care not to be surpassed at a second exhibition." For the excursion it is calculated eight days' time and 4*l.* in money are required; but no doubt the visit may be made for less money and in less time. The Committee recommend a small weekly saving till September, 1851, for the purpose. The general committee have issued regulations connected with a register of lodgings for workmen while in London.——The Society of Arts have issued a notice relative to their proposed prizes for a series of treatises relating to the exhibition.

NEW SCOTTISH NATIONAL GALLERY.—Messrs. Ackerman have recently published a tinted litbograph, showing the intended National Gallery and the Royal Institution at Edinburgh, in connection with the Free Church College and the Castle. The intended building (designed by Mr. Playfair) is Ionic, with two tetrastyle porticoes at each end, and a hexastyle portico in the centre of each side. The intermediate portions present simply a range of antæ, with balustrade.

ESTIMATING.—I send you tenders for erecting the carcases of sixty-two fourth-rate houses at Holloway, for Messrs. Overton and Hughes. Mr. Thos. Tatlock, architect. The quantities were furnished by Mr. Tatlock, at a charge of 2 per cent.:—

Haswell	£5,497
Barcley	5,290
Crabee	5,225
Roddo	5,201
Rees	4,930
Emmins	4,916
Smith	4,859
Trebarne	4,857
Symons	4,700
Salter	4,600
Tear	4,492
Hocken	4,200

It consisted of upwards of 278 rods of brickwork, ornamental coloured brick facings, dressings, &c.; Caen stone copings, cills, and dressings; glazed tubular drains of best construction; 1,726 ft. cube of fir bond and plates; 6,950 cubic feet of fir framed; 325 squares of best Bangor Duchess slating; Williams's patent, 2½-inch roll ridges and hips, with oil cement; ½-inch slab slate soffits, &c. All to be completed by the end of November next. The contractor to be bound with the "usual" facility, and to find two sureties of 500*l.* each that he fulfils his bond.—SURVEYOR.

SURVEY OF BIRMINGHAM.—At a meeting of the guardians held last week, the testimonials of the eight selected candidates were read. According to the *Birmingham Journal*, it was stated by the chairman that he had computed the sums on each assessment, which were as follows:—Mr. Robertson, whose estimate was 946*l.*, was at the rate of 6d. each assessment; Mr. Dyke, 850*l.*, rather less than 6d.; Messrs. Leversage and Corfield, 700*l.*, about 5d.; Mr. Thompson, jun., 500*l.*, very little more than 3d.; Messrs. Hebbert and Faucit, 1,050*l.*, a little more than 6d.; Mr. J. D. Paine, 945*l.*, about 6d.; Mr. I. Newey, 1,445*l.*, at 9d.; and Mr. P. Gannon, 1,450*l.*, at 9d. The chairman further intimated that it had been communicated to him that the commissioners had instructed their surveyor, Mr. Piggott Smith, to make a complete survey and map of the town, which would show every detail, and which would be placed at the service of the parish, so that they would not require a map for the parish.—After the testimonials had been read, it was, on the motion of Mr. Turner, seconded by Mr. Hartle, agreed that the tenders of Messrs. Leversage and Corfield, Mr. J. D. Paine, and Mr. Isaac Newey, be reserved for farther consideration, and that these gentlemen be requested to attend the Board on Wednesday, the 19th. It was also agreed that the travelling expenses of the gentlemen from a distance, if unsuccessful, should be liquidated.

THE NEW BIRMINGHAM WORKHOUSE.—The foundation-stone of this new structure was laid at Birmingham Heath on Monday in last week, on which occasion Mr. Glenn, the contractor, entertained his workmen, 200 in number, with roast beef, plum-pudding, and half a day's pay.

BLOWING UP A CLIFF AT SEAFORD.—A grand explosion of 27,000 lbs. of powder, by the voltaic spark, while stored in chambers cut into the cliff at Seaford, was to come off to-day (Thursday). The object in view is to arrest the encroachment of the sea, and prevent the beach from drifting. The martello tower, forts, and other property will thus, it is hoped, be saved from ultimate destruction. Government are to be the chief projectors of the cliff into the sea; inasmuch as, besides otherwise greatly assisting with the needful, they have allowed the Sappers and Miners to excavate and prepare the works. "The men," it is said, "like the work, and prefer it to being shut up in barracks and garrisons,"—a good hint to Government what to do with the waste power of the soldiery in the forwarding of other great public works that might never otherwise be undertaken, at the same time, also, strengthening the force physically and materially, instead of letting it run to waste. At Seaford the cliff has been penetrated from above by five shafts 41 feet each in depth, for a charge of 600 lbs. of gunpowder; and a gallery, 6 feet high and 3 feet wide, penetrates below from the face of the cliff to a length of 80 feet into its interior, with two smaller branch galleries 3 feet in height, each terminating in a chamber 6 feet 6 in. square in cubic measure and containing 12,000 lbs. of powder. Sir John Burgoyne has the management of the works, which are personally superintended by Captain Froome. The voltaic batteries are under charge of Mr. Ward.

ALTERATIONS IN ST. JAMES'S PARK.—To allay the apprehensions of those who properly look with great jealousy on any alterations which threaten to abridge the parks, we are able to state that the inclosing railing of the palace will be brought forward only to a trifling extent, and that, with this exception, the area enjoyable by the people will remain open as it is. The railing at the western end of the inclosure will be taken down, and an ornamental terrace-wall be substituted at some distance eastward, and in a line ranging with the front of the palace. The Mall will be widened on the south by a slip taken from the inclosure, so as to bring it into the centre of the palace front: (if we understand rightly), and other dress-grounds will be formed on the north side of it to accord with the present inclosure. Trees will be *added* to the Mall.

ROYAL ACADEMY OF ARTS.—We understand that Mr. Jones, R.A., has resigned his appointment, so that on the 3rd of November there will be an election of a Keeper as well as of a President.

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